

Application No. 10/549,784
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Abstract

The invention relates to a semiconductor structure for controlling a current (I), comprising a first n-conductive semiconductor region (2), a current path that runs within the first semiconductor region (2) and a channel region (22). The channel region (22) forms part of the first semiconductor region (2) and comprises a base doping. The current (I) in the channel region (22) can be influenced by means of at least one depletion zone (23, 24). The channel region (22) contains an n-conductive channel region (225) for conducting the current, said latter region having a higher level of doping than the base doping. The conductive channel region (225) is produced by ionic implantation in an epitaxial layer (262) that surrounds the channel region (22).

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